

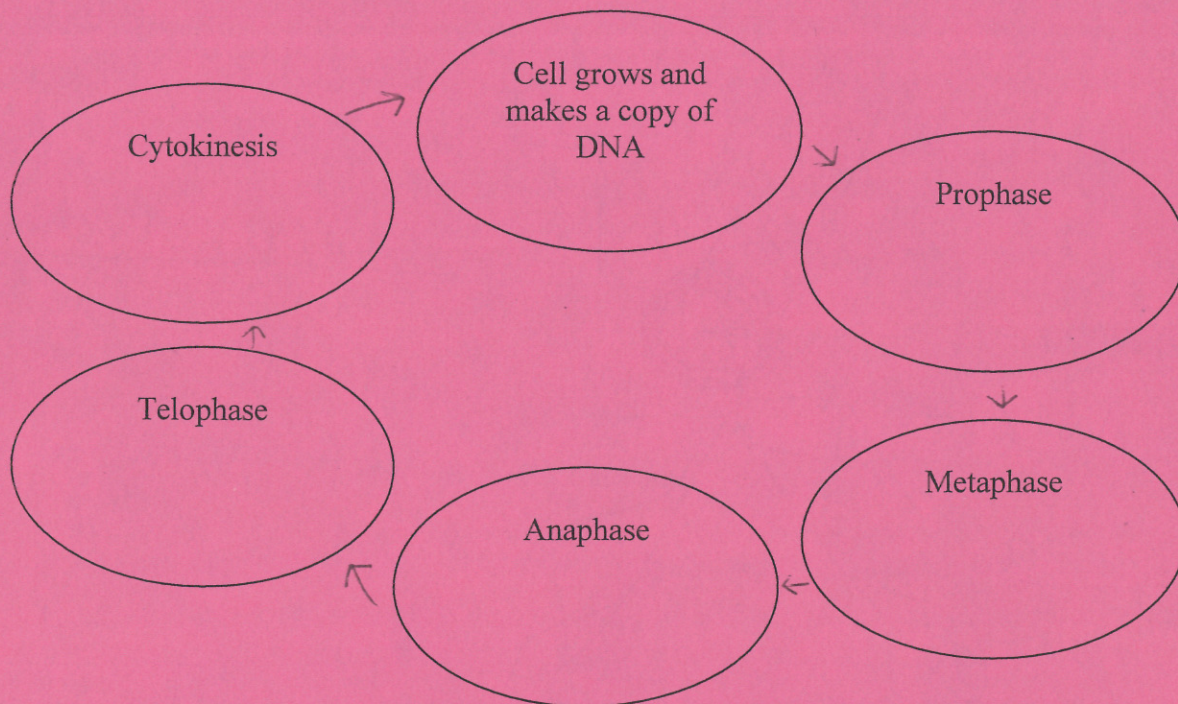
Name:

Date:

Period:

Mitosis Unit *Key*

1. Cell division is the most important cell activity.
2. Why?
 - Cells wear out and need replaced
 - New cells allow body to repair damaged tissue
 - New cells allow body to grow
3. How does a cell make more cells? Depends if cell is prokaryotic or eukaryotic
4. Prokaryotic cell = **binary fission** – splitting into 2 parts
5. Eukaryotic cell = **mitosis** – cell division in which 2 new daughter cells are formed with the exact same number of chromosomes as the parent cell
6. **parent cell** – original cell
7. **daughter cell** – new cell formed



8. **interphase** -- time before mitosis begins; cell grows and genetic material is copied

9. **prophase** – chromatids coil up; nuclear membrane disappears; chromatids joined at centromere

10. **metaphase** – chromosomes line up in the middle; chromosomes attach to spindle fiber at the centromere

11. **anaphase** – ^{chromosomes}chromatids split apart; chromosomes move to opposite ends

12. **telophase** – nuclear membrane reappears; 2 daughter cells are formed

13. **cytokinesis** – cytoplasm divides; organelles distributed into new cells

14. What is the main difference in mitosis between animal and plant cells?

Plant cell = cell wall prevents cell membrane from being pulled inward so then a **cell plate** grows between two nuclei; plate develops into membrane and becomes part of cell wall of new cells

15. **cancer** – uncontrolled cell division

